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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,856	12/09/2003	Donal P. Geraghty	G0631.70031 US01	4243
23628	7590	09/14/2004	EXAMINER	
WOLF GREENFIELD & SACKS, PC FEDERAL RESERVE PLAZA 600 ATLANTIC AVENUE BOSTON, MA 02210-2211			NGUYEN, KHAI M	
			ART UNIT	PAPER NUMBER
			2819	

DATE MAILED: 09/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/731,856

Applicant(s)

GERAGHTY ET AL.

Examiner

Khai M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,8,11,17-27 and 34 is/are rejected.
- 7) ☒ Claim(s) 8-10,12-16, and 28-33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07-19-2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The application has not been checked to the extent necessary to determine the presence of all possible typographical and grammatical errors. However, Applicant's cooperation is requested in correcting any errors of which he/she may become aware in the application.

Claim Objections

2. Regarding claims 8-9, recite "...each clear code register... the other clear code registers" which is unclear to the examiner because claim 1 recites a single clear code register. Clarification/correction is required.

3. Regarding claim 10, recites "...a DAC register...to each DAC...to the corresponding DAC to the corresponding DAC register" which is also unclear to the examiner because claim 1 recites only single DAC. Clarification/correction is required.

4. Regarding claims 12-16, similarly recites "...the clear code stored in *each* clear code register...the corresponding DAC" which is unclear because there is no clear indication that claim 1 contains more than one clear code registers. Therefore, clarification/correction is required.

5. Regarding claims 28-32, recites "...each clear code register is selected...the corresponding DAC" which is unclear for the same reason above. Correction/clarification is required.

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6. Regarding claim 33, recites "... a DAC register is provided...to each DAC..." which is also unclear to the examiner because there is no clear indication that the claim 19 includes more than one DAC. Therefore, clarification/ correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 8, 11, 19-20, 27, and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Russell (US 6,392,578).

Regarding claims 1, 8, 19, and 27, Russell directly discloses an integrated circuit and a method of using the same (see Fig. 1), which includes a DAC (5); a configurable clear code register (7) for storing a digital clear code (see, for example, column 3, lines 15-16 and the abstract "A register 7 stores a transfer coefficient in binary code which can be read from the input port 2"); and control circuit (8, 4) responsive to a clear signal for transferring the clear code from the clear code register to the DAC (see the summary of the invention).

Regarding claim 20, Russell discloses that the clear/coefficient code is written/transferred to the clear code register (7) (see column 1, lines 60-65).

Regarding claims 11 & 34, Russell discloses the clear signal is an externally generated signal (the coefficient in binary code) and is applied to the integrated circuit (Fig. 1 and abstract, line 7+).

9. Claims 17-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Tabler (US 6,466,149). Tabler discloses a multi-channel integrated circuit (Fig. 4), comprising: a plurality of channels (Vout1, Vout2), a DAC (30, 34) located in each channel, a plurality of clear code registers (22, 24, 26, 28, 32) for storing digital clear codes (14) for respective ones of at least some of the DACs, and a control circuit (20) responsive to a clear signal for transferring the clear codes from the clear code registers to the corresponding DACs, so that the corresponding DACs output an analogue output signal (Vout1, Vout2) corresponding to the clear codes in the clear condition.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell (US 6,392,578) in view of the applicant's admitted prior art (see page 1, lines 13+) (hereinafter, AAPA). Russell discloses every aspect of the claimed invention (see the above rejected claims) except for the multi-channels aspect. The AAPA recites (see the background of the invention, page 1, lines 13-22) that multi-channel circuits include limitations as being claims in claims 21-26 are known. Therefore, it would have been

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obvious to one person having ordinary skill in the art at the time the invention was made to provide a digital-to-analog circuit as taught by Russell with a multi-channel feature as discloses in the background for increasing a conversion speed.

Prior Art

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclose (see the attached PTO-892).

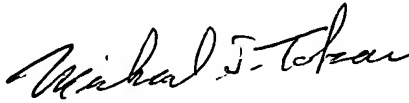
Contact Information

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khai M. Nguyen whose telephone number is 571-272-1809. The examiner can normally be reached on 8:30 to 5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KN
September 1, 2004


Michael Tokar
Supervisory Patent Examiner
Technology Center 2800